

What is Claimed is:

1. An organic electroluminescence (EL) device comprising:

a substrate;

a first electrode on the substrate;

an organic emitting layer on the first electrode; and

a second electrode on the organic emitting layer having a stack of at least one transparent thin film layer.
2. The device as claimed in claim 1, wherein the first electrode is formed of a material selected from ITO, Al, and Ag.
3. The device as claimed in claim 1, wherein the organic emitting layer includes a stack of a hole injecting layer, a hole transport layer, an emitting layer, an electron transport layer, and an electron injecting layer formed on the first electrode or the second electrode in succession.
4. The device as claimed in claim 1, wherein the transparent thin film layer of the second electrode includes a first layer of a metal, and a second layer of a transparent material.
5. The device as claimed in claim 4, wherein the first layer and the second layer are stacked alternately.
6. The device as claimed in claim 4, wherein the first layer is formed of a material selected from Ag, Al, Cr, Mo, Au, Pt, Sn, Ln, and Mg, and Al:Li, Ag:Mg, Ag:Li, and the

second layer is formed of a material selected from ITO, IZO, TiO_2 , SiO_2 , and Si_3N_4 .

7. The device as claimed in claim 4, wherein the transparent thin film layer of the second electrode includes 1 – 100 layers in total.

8. The device as claimed in claim 1, further comprising a protection layer on the second electrode having at least one transparent thin film layer.

9. The device as claimed in claim 8, wherein the transparent thin film layer of the protection film includes four layers in total.

10. The device as claimed in claim 9, wherein the first layer of the protection film is formed of a material selected from a polymer including fluorine, stearly acrylate, lauryl acrylate, 2-phenoxyethyl acrylate, isodecyl acrylate, isooctyl acrylate, isobornyl acrylate, 1,3-butylene glycol acrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, ethoxylated bisphenol A diacrylate, propoxylated neophentyl glycol diacrylate, tris(2-hydroxyethyl) isocyanurate triacrylate, and trimethylolpropane triacrylate, the second layer of the protection film is formed of a material selected from SiC , SiO , SiO_2 , and Si_xN_y , the third layer of the protection film is formed of a sealant of a silicon compound of an epoxy group or an acryl group, and the fourth layer of the protection film is formed of a material selected from PET, PMMA, and a polymer of a fluorine group.

11. An organic EL device comprising:

a substrate;

a first electrode on the substrate;
an organic emitting layer on the first electrode;
a second electrode on the organic emitting layer having alternate stack of at least one metal layer and at least a transparent thin film layer; and
a protection film on the second electrode having a stack of at least one transparent thin film layer.

12. The device as claimed in claim 11, wherein the first electrode is formed of a material selected from ITO, Al, and Ag.

13. The device as claimed in claim 11, wherein the organic emitting layer includes a stack of a hole injecting layer, a hole transport layer, an emitting layer, an electron transport layer, and an electron injecting layer formed on the first electrode or the second electrode in succession.

14. The device as claimed in claim 11, wherein the metal layer of the second electrode is formed of a material selected from Ag, Al, Cr, Mo, Au, Pt, Sn, Ln, and Mg, and Al:Li, Ag:Mg, Ag:Li, and the transparent thin film layer is formed of a material selected from ITO, IZO, TiO₂, SiO₂, and Si₃N₄.

15. The device as claimed in claim 11, wherein the second electrode includes 1 – 100 layers in total.

16. The device as claimed in claim 11, wherein the transparent thin film layer of the

protection film includes four layers in total.

17. The device as claimed in claim 16, wherein the first layer of the protection film is formed of a material selected from a polymer including fluorine, stearly acrylate, lauryl acrylate, 2-phenoxyethyl acrylate, isodecyl acrylate, isooctyl acrylate, iso bornly acrylate, 1,3-butylene glycol acrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, ethoxylated bisphenol A diacrylate, propoxylated neophentyl glycol diacrylate, tris(2-hydroxyethyl) isocyanurate triacrylate, and trimethylolpropane triacrylate, the second layer of the protection film is formed of a material selected from SiC, SiO, SiO₂, and Si_xN_y, the third layer of the protection film is formed of a sealant of a silicon compound of an epoxy group or an acryl group, and the fourth layer of the protection film is formed of a material selected from PET, PMMA, and a polymer of a fluorine group.